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MOVEMENT OF POPULATION IN FRANCE FOR 1890.

The March number of the *Publications* contained a review of an article on the *Birth rate in Europe during the last 20 years*. The article upon which the review was based was written by Charles Richet, who showed that the birth rate has decreased for all countries in Europe, but that the rate of decrease is increasing more rapidly in France than in any other country. He also made the prophecy that it will not be long before the death rate will exceed the birth rate. This prophecy is fulfilled in the year 1890, as shown by an article in the *Revue Scientifique*, November 7, 1891, of which the following is a summary.

During the year 1890 there were 269,332 marriages, 3602 less than in 1889; 838,059 births, 42,520 less than the year before; and 876,505 deaths, 81,572 more than in 1889.

This evil, foreseen for many years, has then taken such rapid strides that the diminution of the population is already an accomplished fact. Considering the figures alone this is undeniably the case. The excess of births over deaths, which in 1889 amounted to about 85,000, and which has varied between 44,000 and 200,000 since 1872, has suddenly changed to an excess of deaths over births, and the population has diminished by some 30,000.

But the very suddenness of the change indicates in itself that some abnormal element exists in this phenomenon which is important to investigate. In 1854 and 1855 the French population lost about 100,000, but the loss was attributed to cholera and the Crimean war. Again, in 1870 and 1871, there was a new loss of 500,000, but the German invasion with its cortege of maladies was responsible. And now the decrease in 1890 is accounted for by the epidemic of *la grippe*, which began at the close of 1889 and lasted throughout a good portion of the year 1890.

It is estimated that *la grippe* caused directly or indirectly from 30,000 to 40,000 deaths, and to this must be added the number of births that were prevented because of the illness of a large portion of the population.

The number of births began to increase in August, the eighth month of the year. Now, the difference between the average monthly number of births since August and the average number up to August is 29,000. Besides, it is stated that the birth rate increases more and

more towards the end of the year, that is, as the effects of the epidemic become fainter and fainter, and, also, that the birth rate is tending towards its usual figure.

These observations authorize the addition of 30,000 births prevented to the 40,000 lives actually lost by the epidemic, which gives a total of 70,000 units loss due to *la grippe*. The population being decreased 40,000 units, this would give a theoretical increase of 30,000 units, which would be actual if the year had been normal. The increase would not be much to boast of, however, and inferior to the increments of preceding years.

Since writing the above there has been received an extract from the *Journal Officiel*, of Oct. 21, 1891, on *Le mouvement de la population en France pendant l'année, 1890*.

It is stated that the year 1890 was one of the most disastrous to the population. The number of births in 1890 exceeded the number born in 1871 (the poorest year) by only 12,000. The number of deaths in 1890 has not been exceeded by any year for 20 years, while the number of marriages has not been so low for 40 years. The whole situation is reported as being due to the epidemic. Of the 87 departments only 17 had an excess of births over deaths. These were principally in the north of France. In 60 departments there was an excess of deaths over births, chiefly in the basin of the Garonne.

The *Direction de l'assistance et de l'hygiène* has just published the sanitary statistics for France for the year 1890, and also for the quinquennial period 1886-90. The tables give the total deaths for all causes, and the principal causes of death in the cities and parishes of France and Algeria of 5000 inhabitants or over, taken from the monthly bulletins of the municipalities.

Some of the cities made incomplete returns and some none at all. From those that did the average annual mortality for the five years 1886-90 is 842,465, or 22.21 per 1000. The rate for Paris is but little above their general average, viz., 24.3. The high rates for Nanterre, Gentilly, and Ivry, 180.8, 56.1, 40.9 respectively, are due to the many hospitals at these places.

8 cities have a death rate of more than 40 per 1000.									
22	"	"	"	"	"	from 38.0-34.0	"	"	"
42	"	"	"	"	"	33.0-30.0	"	"	"
5	"	"	"	"	"	14.9-13.7	"	"	"
20	"	"	"	"	"	16.9-15.7	"	"	"

One city, Givet, has a death rate of only 10 per 1000.

The mortality in Algiers is high for all cities except Guehna and Batna, where the rate is only 14 per 1000. The rates for some of these cities are :—

Mestapha,	71.5	Saïda,	42.7
Bougie,	51.5	Relizane,	41.8
Mostaganem,	43.9	Guehna and Batna,	14.0
Constantine,	43.3	All others at least	30.0

With the exception of Paris, where the low death rate is due, without doubt, to improved sanitation, the average death rates increase with the density of the population.

Death risks in cities below	5,000 inhabitants,	21.74
“ “ “ “ from	5,000 to 10,000	“ 24.84
“ “ “ “ “	10,000 to 20,000	“ 26.60
“ “ “ “ “	20,000 to 100,000	“ 27.21
“ “ “ “ “	100,000 to 200,000	“ 28.31

The principal causes of death are as follows :—

Phthisis	caused one death in every	7.4 deaths.
Pneumonia	“ “ “ “ “	10.9 “
Bronchitis	“ “ “ “ “	13.7 “
Diarrhœa	“ “ “ “ “	11.0 “
Diphtheria	“ “ “ “ “	37.5 “
Typhoid fever	“ “ “ “ “	44.5 “
Measles	“ “ “ “ “	47.8 “
Small pox	“ “ “ “ “	96.2 “
Whooping cough	“ “ “ “ “	143.0 “

Neither phthisis nor the diseases of the respiratory organs have decreased, while pneumonia and bronchitis have increased. This increase is attributed to *la grippe*, which was epidemic in all Europe and in most of the United States in December of 1889 and January of 1890, increasing the death rates at all places.

The average number of deaths in Paris for the years 1886–89 was 4414 for December and 4962 for January. For the years 1889 and 1890 these figures increased to 7437 and 7147, respectively, showing an increase of about 6000 deaths for these two months. The deaths from *la grippe* alone in the different cities were as follows :—

Montpellier,	21.4 per 1000 living.	Caen,	18.2 per 1000 living.
Levallois-Pellet,	19.7 “ “ “	Marseilles,	18.2 “ “ “
Reims,	19.0 “ “ “	Brest,	17.7 “ “ “
Rouen,	18.0 “ “ “		

Paris, with a death rate of 15.0 per 1000 is the twenty-eighth city on the list.

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